

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number
WO 2005/000086 A2

(51) International Patent Classification⁷: **A61B** (74) Agent: WEBB, Cynthia; Webb & Associates, P.O. Box 2189, IL-76121 Rehovot (IL).

(21) International Application Number:
PCT/IL2004/000583

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 30 June 2004 (30.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/483,107 30 June 2003 (30.06.2003) US

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants (*for all designated States except US*): YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM [IL/IL]; P.O.Box 39135, IL-91390 Jerusalem (IL). BEN-GURION UNIVERSITY OF THE NEGEV RESEARCH AND DEVELOPMENT AUTHORITY [IL/IL]; P.O. Box 653, IL-84104 Beer-Sheva (IL).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): MANDELBOIM, Ofer [IL/IL]; 58 Hayarden Street, IL-73142 Shoham (IL). PORGADOR, Angel [IL/IL]; 11 Tavlan Street, IL-85338 Lehavim (IL).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/000086 A2

(54) Title: FRAGMENTS OF NKp44 AND NKp46 FOR TARGETING VIRAL-INFECTED AND TUMOR CELLS

(57) Abstract: The present invention relates generally to peptides derived from the natural cytotoxicity receptors on natural killer (NK) cells and to antibodies against peptide epitopes on these receptor. In particular, the present invention identifies an essential epitope in the proximal domain of NKp46 and NKp44 receptors present on NK cells, as a crucial element for the binding to viral-infected. The present invention provides peptides that are derived from the amino acid sequence of NKp46 receptor, capable of specific targeting of viral-infected cells and tumor cells and monoclonal antibodies which recognize a specific domain of NKp46. The present invention further provides hyperglycosylated peptides that are derived from the NKp44 receptor, capable of specific targeting of viral-infected cells.